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OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

4500

TO : Boyd Wickman, Project Leader

DATE: October 17, 1967

FROM : R. R. Mason

SUBJECT: Tussock moth egg population at Sierra Ancha

Following are results of the egg sampling for Douglas-fir tussock moth on October 4 and 5 near Aztec Peak, Arizona. As you remember, egg masses were estimated by cluster sampling at the same ten points where larval populations were sampled twice previously (see memos dated June 13 and July 31, 1967).

Since egg mass distribution in undamaged trees has not been previously investigated, the whole tree crown was sampled representatively according to its foliage distribution. Number of eggs were calculated by multiplying number of masses times 160, the average number of eggs per mass as determined in previous studies.

Point	Mean Egg Masses per 1000 in^2	Mean Eggs per 1000 in^2	Standard Error (eggs)	Percentage of Samples with Egg masses
A	.024	3.84	2.88	3
B	.052	8.32	3.52	5
C	.333	53.28	12.00	27
D	.148	23.68	8.00	15
E	.011	1.76	1.76	1
F	0	0	0	0
G	.016	2.56	1.76	3
H	.007	1.12	0.96	2
I	.012	1.92	1.76	1
J	0	0	0	0
All points	.060	9.65	5.34	5.7

Some unemerged pupae were recovered which, if they are healthy, implies that oviposition for the season was not complete. In this case the above sample may slightly underestimate the true egg complement.

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Only points A, B, C and D have a substantially larger number of eggs present now than there were first instar larvae at the same points in early June. For all practical purposes the remaining points have the same or a lower population than at the beginning of the summer. Overwintering egg mortality and parasitism may reduce population at all points even further. At the present time it would seem that only a relatively small area of 100 acres or so to the north and west of the Murphy Ranch has any potential of reaching outbreak status by 1968.

cc: C. G. Thompson
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